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Lance J. Lieberman, Esq.
Cohen, Pontani, Lieberman & Pavane
Suite 1210
551 Fifth Avenue
New York, NY 10176

EXAMINER	
HUYNH, BA	

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/616,208
Filing Date: July 08, 2003
Appellant(s): HEDRICK, GEOFFREY S.M.

Lance J. Lieberman
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/28/06 appealing from the Office action mailed 10/31/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Cl2aims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

20030132860	Feyereisen et al	7-2003
6909439	Amro et al	6-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feyereisen et al in view of Amro et al. as set forth in the final rejection dated 10/27/05

- As for claims 1, 10: Feyereisen et al (herein Feyereisen) teach a computer implemented method and corresponding system for providing a contextual display of flight instruments to a user according to modes and phases of flight, allowing to set altitude, speed, and/or thrust parameters, etc... (0027, 0061, 0062), comprising the steps/means for:

  manually manipulating by the user a control for one of adjusting data setting and selecting the data setting to be adjusted (inherently included in Feyereisen's teaching of setting parameters in each "mode" and "phase"),

  sensing an event relating to flight operation (0027, 0062),

  altering the display image of the data setting to a predetermined level to unambiguously direct the user attention to the image data setting to be adjusted (0064). It also inherently included in Feyereisen's teaching of contextually changing the instrument sizes according to mode and phase that the altered instrument image is maintained during the sensed event, and reduced the altered image to a predetermined level when the sensed event ended.

  It appears that the sensing an event related to flight operation inherently includes sensing user's manipulation of one of the instruments, e.g., setting altitude or speed (0062). Even if it is not, enlarging a display image responsive to sensing user manipulations is well known in the art of image display (See US 6,909,439, abstract).

It would have been obvious to one of skill in the art, at the time the invention was made, to combine the well-known implementation of enlarging an image responsive to sensed user manipulation of the image to Feyereisen's teaching of contextual enlargement of the flight instruments. Motivation of the combine is for the ease and accuracy of user input parameters.

- As for claims 2, 11: Per Feyereisen, the altered image size can be 20% and not limited thereto (0064), i.e., it is a design preference to have the image size increased at any percentage. Thus having the image size become double would have been a design preference in light of Feyereisen.
- As for claims 3, 12: Feyereisen fails to clearly teach displaying a frame encircling the enlarged image to further emphasize the image. However, Official notice is taken that implementation of the frame encircling an image such as a highlighted border or a halo is well known in computer graphical user interface. It would have been obvious to one of skill in the art, at the time the invention was made, to combine the well-known implementation of displaying a frame encircling the enlarged image to further emphasize the image.
- As for claims 4, 13: In view of the combined, the enlarged image includes an enlarged portion having parameter to be adjusted.
- As for claims 5, 14: Feyereisen fails to clearly teach displaying a frame encircling the enlarged portion of the image. However official notice is taken that implementation of displaying a frame encircling the enlarged portion of the image, such as selection or focus frame/rectangle is well known in the art. It would have been obvious to one

of skill in the art, at the time the invention was made, to combine the well-known implementation of displaying a selection or focus frame/rectangle encircle the enlarged image portion. Motivation of the combining is for focusing the user attention to the enlarged portion.

- As for claims 6, 15: The image data setting comprises alphanumeric setting adjustable within a predetermined range (e.g., altitude, direction, speed, thrust setting). Element 120, 128 include representations of portions of predetermined ranges proximate to alphanumeric values (fig. 3).
- As for claims 7, 16: The enlarged image is displayed overlaying with a degree of translucence overlaying another image allowing the other image to be viewed (fig. 3).
- As for claims 8, 9, 17, 18: It inherently included in Feyereisen's teaching of contextually changing the instrument sizes according to mode and phase that the altered instrument image is maintained during the sensed event, and reduced the altered image to a predetermined level when the sensed event ended (i.e., after the user exit the mode or phase). Implementation of allowing a time interval prior to changing the image size would have been obvious to one of skill in the art for the obvious reason of allowing sufficient transition time.
- As for claim 19: The display comprises a flat panel display (0043).

(10) Response to Argument

Conventional practices and well-known art: Cockpit's flight indicators are displayed as graphical objects. For properly and safely operating an aircraft, it is commonly known that the pilot frequently needs to adjust cockpit's flight indicators, before flight and during flight, by

selecting the indicators and manually adjusting the indicators. Examples of these operations include setting altitude, airspeed, radio frequencies, etc... This practice is also recognized by the appellant as set forth in the specification, paragraphs 0003-0006. For user input to a graphical indicator that requires accuracy, it is known to enlarge the indicator to help ease the input operation, this implementation is disclosed by Amro et al., col. 5, lines 43-64, col. 6, lines 43-65, and in figures 6A-6C.

The Feyereisen et al reference: Feyereisen et al teach the contextually enlarging of flight indicators responsive to sensing of different operation modes (0013, 0027, 0062, 0079). The indicators are enlarged to pre-determined level to unambiguously direct the user attention to the image data setting (0020, 0064) different from nominal size (0027). The operation modes are user selectable by operating the mode control 46 (0079). As set forth above, it is frequently necessary for the pilot to manually adjust flight indicators. Thus it appears that the manually adjusting flight indicators by the pilot by manually selecting and manipulating the indicators are inherently included in Feyereisen. Further support for this inherency reasoning also can be found in Feyereisen par. 0092 wherein Feyereisen clearly refers to the manual setting of altitude by the pilot (incorporated by reference US 6,216,064, col. 2, lines 34-54). Since the flight indicators are contextually enlarged responsive to operation mode (0027, 0062), and since the mode is user selectable (0079), e.g., altimeter setting mode (see appellant's definition of "mode" in paragraph 0025), it appears that the indicators are enlarged responsive to the user selecting and manipulating the altimeter indicator. Even if it is not, enlarging a graphical object to receive user manipulation is well known in the art as disclosed by Amro (col. 5, lines 43-64, col. 6, lines 43-65, and in figures 6A-6C). It would have been obvious to one of skill in the art, at the time the

invention was made, to combine Amro's teaching of enlarging a graphical control object for receiving user input to Feyereisen. Motivation of the combining is for the accuracy of the input and for the ease of user concentration as suggested by Amro (5:43-57).

Response to the arguments: Claim 1 recites "enlarging, in response to said sensed manipulating of the control by the user, the image of the data setting on the display from the predetermined size to a predeterminately enlarged size". Note that the language "a control for" does not necessarily means an indicator but can also be a control separate from the indicator. The appellant argues that Feyereisen in view of Amro does not teach or suggests enlarging of a manually-adjustable displayed data setting image in response to user manipulation of a control. Per the appellant, Feyereisen's flight indicators are enlarged "solely" in response to an automated determination that the aircraft is in or entering into a predetermined "mode or phase of flight" and for the user to monitor only. If the argument is true, then the pilot would not be able to operate the control knob 46 to select the mode of operation as disclosed by Feyereisen in par. 0013 and 0079, since the displayed indicators would be fixed to the current mode or phase of flight, and the pilot would not be able to change radio frequency, setting altimeter or airspeed as most frequently needed. Thus the mode selector 46 not only allowing the pilot to monitor indicators contextually appropriate for the current mode of operation but also allow the pilot to manipulate them as needed. Feyereisen clearly discloses that the indicators are contextually enlarged responsive to sensed selected mode of "operations" (0013). Setting altimeter indicator is a mode of operation (appellant's par. 0025). As set forth above, selecting and manually adjusting a flight indicator is inherently included in Feyereisen, it appears that the altimeter is enlarged responsive to Feyereisen's altimeter setting mode. Even if it is not, enlarging a

graphical object to receive user manipulation is well known in the art as disclosed by Amro (col. 5, lines 43-64, col. 6, lines 43-65, and in figures 6A-6C). In light of Feyereisen's teaching of enlarging the control indicator to amplify current data setting, it would have been obvious to one of skill in the art, at the time the invention was made, to combine Amro's teaching of enlarging a graphical control object for receiving user data setting input to Feyereisen. Motivation of the combining is for the accuracy of the data setting and for the ease of user concentration as suggested by Amro (5:43-57). Claim 10 is broader in one aspect by omitting the sensing step. Claim 10 recites "in response to user-manipulation of the control, enlarging the image of the data setting on the display from a predetermined size to a predeterminately enlarged size". The claim is not patentable in view of Feyereisen, or alternatively in view of Feyereisen as combined with Amro as set forth above.

Claim 1 recites "reducing the enlarged image... when said sensed manipulating of the control is determined to have ceased". The appellant further argues that Feyereisen in view of Amro does not teach reduction of the enlarged image in response to sensing that the user manipulation of the control has ceased. As set forth above, the Feyereisen's flight indicators are enlarged responsive to sensed operational mode (0020, 0062, 0064). The operational modes are user selectable (0013, 0079). When not in the sensed mode of operation, the indicators are reduced to nominal display size (0027). Note that claim 1 does not specify how the system "senses" the manipulation of the control. Thus the sensing should not be limited touching and not touching of the indicator only as may be implied by the appellant. In Feyereisen, the sensing of a current operation mode ceases when the pilot selects a different operation mode either by using control 46 or by selecting a different indicator as reasoned above. Alternatively, in view of

Amro, the sensing ceases as the user indicates that the manipulation is done (5:48-57). Claim 10 is broader in that aspect by omitting the sensing means. Claim 10 recites "reducing the enlarged image... when user manipulating of said control has ceased". The claim is not patentable in view of Feyereisen, or alternatively in view of Feyereisen as combined with Amro as set forth above.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as set forth above, it is frequently necessary for the pilot to manually adjust flight indicators. Thus it appears that the manually adjusting flight indicators by the pilot by manually selecting and manipulating the indicators are inherently included in Feyereisen. Further support for this inherency reasoning also can be found in Feyereisen par. 0092 wherein Feyereisen clearly refers to the manual setting of altitude by the pilot (incorporated by reference US 6,216,064, col. 2, lines 34-54). Since the flight indicators are contextually enlarged responsive to operation mode (0027, 0062), and since the mode is user selectable (0079), e.g., altimeter setting mode (see appellant's definition of "mode" in paragraph 0025), it appears that the indicators are enlarged responsive to the user selecting and manipulating the altimeter indicator. Even if it is not, enlarging a graphical object to receive user manipulation is well known in the art as disclosed by Amro (col. 5, lines 43-64, col. 6, lines 43-65, and in figures 6A-

6C). In light of Feyereisen's teaching of enlarging the control indicator to amplify current data setting, it would have been obvious to one of skill in the art, at the time the invention was made, to combine Amro's teaching of enlarging a graphical control object for receiving user data setting input to Feyereisen. Motivation of the combining is for the accuracy of the input and for the ease of user concentration as suggested by Amro (5:43-57).

The appellant further argues that Feyereisen's control 46 is selectable by the user to monitor flight indicators not to manipulate them. If the argument is true, then the pilot would not be able to operate the control knob 46 to select the mode of operation as disclosed by Feyereisen in par. 0013 and 0079, since the displayed indicators would be fixed to the current mode or phase of flight, and the pilot would not be able to change radio frequency, setting altimeter or airspeed as most frequently needed. Thus the mode selector 46 not only allowing the pilot to monitor indicators contextually appropriate for the current mode of operation but also allow the pilot to manipulate them as needed. Alternatively, since manually selecting and manipulating the indicators are inherently included in Feyereisen (Feyereisen's par. 0092, incorporated by reference US 6,216,064, col. 2, lines 34-54), and since the flight indicators are contextually enlarged responsive to operation mode (0027, 0062), it appears that the indicators are enlarged responsive to the user selecting the indicator. Even if it is not, enlarging a graphical object to receive user manipulation is well known in the art as disclosed by Amro (col. 5, lines 43-64, col. 6, lines 43-65, and in figures 6A-6C). In light of Feyereisen's teaching of enlarging the control indicator to amplify current data setting, it would have been obvious to one of skill in the art, at the time the invention was made, to combine Amro's teaching of enlarging a graphical control object for receiving user data setting input to Feyereisen. Motivation of the combining is

for the accuracy of the input and for the ease of user concentration as suggested by Amro (5:43-57). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The appellant further argues that Feyereisen in view of Amro does not teach the enlarged image is displayed overlaying with a degree of translucence overlaying another image. Feyereisen clearly discloses that the enlarged indicators are the airspeed indicator 120, the altitude indicator 128, and the attitude indicator 126 of figure 3 (Feyereisen's 0061). In figure 3, all indicators are displayed with a degree of translucence allowing background images such as ground 104, 105 and sky 102 to be viewed. The appellant appears to pick out only the displayed pointer 122 of indicator 120 to support for the argument, which is not in the context of Feyereisen's disclosure.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Ba Huynh

Primary Examiner

AU 2179

BA HUYNH
PRIMARY EXAMINER

Conferees:

Weilun, Lo

Supervisory Patent Examiner

AU 2179

WEILUN LO
SUPERVISORY PATENT EXAMINER

Kristine Kincaid

Supervisory

Patent Examiner

AU 2174

KRISTINE KINCAID
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100